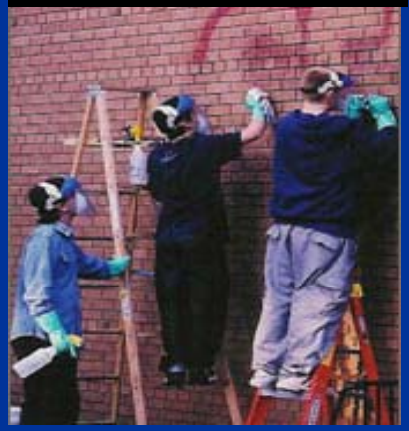
Green Chemistry / Safer Alternatives

Essential Component of an Occupational Public Health Program

Brake Cleaning

Dry Cleaning

Graffiti Removal



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Overview

Protecting Workers From Chemical Hazards
Why Green Chemistry is Important

- Addresses the unique impacts of toxic chemicals on workers' health
- Prevents contamination of environment & communities caused by workplaces
- Promotes integrated strategies to protect workers, communities, & the environment
- Builds on safer chemical alternatives currently used in many industrial applications

Toxic Chemicals
Unique Impacts on Workers

- Exposures during manufacture, use, disposal
- Higher, longer, & more frequent exposures
- Combined environmental and work exposures
- Potential chronic disease risks due to lack of protective exposure limits
- Difficult for employers of small businesses to comply with training & protective measures

Some Chemicals That Pose Chronic Health Risks

Chemical	Health Hazard(s)	Cancer Risk at PEL* or Regulatory Status
Dibutyl Phthalate	Development; male, female reproduction	Regulated as an irritant
Chromium VI	Cancer	10-45 per 1000**
Perchloroethylene	Cancer	130 per 1000
Acetaldehyde	Cancer	24 per 1000
Lead	Development; male, female reproduction	Reg. not based on current science
Cadmium	Cancer	3-15 per 1000

*Permissible Exposure Limit (Cal/OSHA)

**Excess cancers per 1000 workers exposed over a working lifetime

Workers & Public Can Be Exposed to Same Chemical

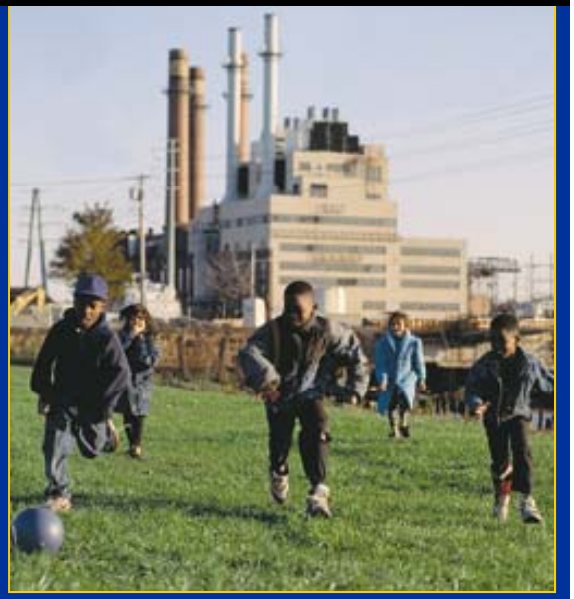
Degreaser

Consumer Product Available Online

Paint Thinner

Consumer Product

Plant Next to Public Space



Waterproof Coating

Consumer Product

Autobody Shop Next to Houses

Integrating Strategies to Protect Against Chemical Hazards—Why it's Important

- Prevents transfer of risks
- Decreases worker & community health risks
- Simplifies regulatory compliance
- Cost-effective
- Promotes collaboration/sharing of expertise
- Broadens support for green chemistry

Protecting Public Health & the Environment From Chemical Hazards —What's Needed

- Safe Chemicals Act 2010 (TSCA Reform)
- Information to prioritize interventions
- Resources to develop, test, provide training on, & implement safer chemical alternatives
- Requirement to work across agencies & programs to develop & implement green chemistry regulations & policies